Records of the Australian Museum (2011) Vol. 63: 89–98. ISSN 0067-1975
doi:10.3853/j.0067-1975.63.2011.1555

Revision of the Tribe Microtrachelizini Zimmerman, 1994, from Australia: New Taxa and Records (Insecta: Coleoptera, Brentidae)

ANTOINE MANTILLERI

Muséum national d'Histoire naturelle,
Entomologie, C.P. 50, 57 rue Cuvier, F-75231 Paris cedex 05, France
amantill@mnhn.fr

ABSTRACT. The Microtrachelizini from Australia are revised. Four species and one genus are described as new for science (*Araiorrhinus zimmermani* n.sp., *Howeius micropterus* n.gen., n.sp., *Microtrachelizus altostriatus* n.sp. and *M. australicus* n.sp.). One new synonymy is proposed (*M. laevis* Damoiseau, 1987 n. syn. of *M. montrouzieri* Senna, 1903) and two species are recorded as new for Australia (*M. montrouzieri* and *M. occultus* Kleine, 1935, the latter removed from synonymy with *M. bhamoensis* [Senna, 1892]). An identification key and pictures of the habitus are given for the nine Microtrachelizini species presently known from Australia.

MANTILLERI, ANTOINE, 2011. Revision of the tribe Microtrachelizini Zimmerman, 1994, from Australia: new taxa and records (Insecta: Coleoptera, Brentidae). *Records of the Australian Museum* 63(1): 89–98.

Introduction

Microtrachelizini Zimmerman, 1994 is a tribe (or subtribe) of brentid weevils occurring in the Old World and containing about 70 species distributed over nine genera (Sforzi & Bartolozzi, 2004). Four species are currently known from Australia: *Araiorrhinus howittii* (Pascoe, 1872), *Higonius novenarius* Damoiseau, 1987, *Microtrachelizus laevis* Damoiseau, 1987 and *M. queenslandicus* Damoiseau, 1987. Zimmerman (1994) listed nine Microtrachelizini species for Australia but only three were named (*A. howittii, H. novenarius* and *M. laevis*), while the others were labelled only as *Microtrachelizus* species 2 to 7. Examination of these specimens and of unidentified material from diverse collections allowed the recognition and description of four new species and one new genus, as well as the establishment of one new synonymy and the recording of two additional species for Australia.

Material and methods

Measurements were taken using a Nikon SMZ1000 stereo microscope. Body length was measured from the apex of the rostrum to the apex of the elytra, head length from the apex of the rostrum to the base of the head, pronotal length from apex to base along the midline, pronotal width across the widest part of the pronotum and elytral length from apex to base along the midline. Male and female genitalia were extracted by removing the abdomen of relaxed specimens and boiling it for 10 minutes in hot KOH solution. Male genitalia were glued on the card with the specimen and female genitalia mounted on microscope slides in Euparal« mountant. The latter were shown to be taxonomically and phylogenetically very informative in Curculionoidea (Gaiger & Vanin, 2008). The terminology used for genital segments follows partly Deuve (1994). In the descriptions, the term "metasternum" is used for the posterior ventral part of the metathorax. Other

Key to the species of Australian Microtrachelizini

1 Antenna with nine segments ..... *Higonius novenarius* Damoiseau, 1987
—— Antenna with eleven segments 2

2 Pronotal groove distinct over full length 3
—— Pronotal groove distinct only at base or obsolescent 7

3 Elytral interstria 2 distinct only at apex 4
—— Elytral interstria 2 distinct at least at base and at apex 5

4 Prothorax of male hairy in front of procoxae; parameres not fused at base; temples protruding behind eyes; elytral interstriae shiny ..... *Microtrachelizus occultus* Kleine, 1935
—— Prothorax of male glabrous in front of procoxae; parameres fused at base; temples hardly distinct, not protruding; elytral interstriae dull ..... *Microtrachelizus altostriatus* n.sp.

5 Elytral interstria 4 not reaching base of elytra ..... *Microtrachelizus montrouzieri* Senna, 1903
—— Elytral interstria 4 reaching base of elytra 6

6 Pronotum almost cylindrical; prorostrum long; apex of antennomere 11 acute; styli of gonocoxites apical ..... *Araiorrhinus howittii* (Pascoe, 1872)
—— Pronotum much wider at base than at apex; prorostrum shorter; apex of antennomere 11 not acute; styli of gonocoxites lateral *Microtrachelizus australicus* n.sp.

7 Elytra laterally smooth and shiny ..... *Araiorrhinus zimmermani* n.sp.
—— Elytra laterally not smooth, interstriae more or less distinct 8

8 Elytral interstria 2 distinct only at apex; humeral callus distinct (see habitus photo), hind wings functional; length < 7 mm ..... *Microtrachelizus queenslandicus* Damoiseau, 1987
—— Elytral interstria 2 distinct from base to apex; humeral callus weak (see habitus photo), hind wings reduced; length > 7 mm ..... *Howeius micropterus* n.sp.

terms are defined by Sforzi & Bartolozzi (2004) or are widely used in describing brentid morphology. Only Australian specimens are listed under "Material examined".

Specimens studied here are depsoited in the following meseums:

AMS	Australian Museum, New South Wales, Sydney, Australia.
ANIC	Australian National Insect Collection, Canberra, Australia.
HNHM	Hungarian Natural History Museum, Budapest, Hungary.
QMB	Queensland Museum, Brisbane, Australia.
MNHN	Muséum national d'Histoire naturelle, Paris, France.
MSNG	Museo Civico di Storia Naturale "Giacomo Doria", Genova, Italy.
MZUF	Museo di Storia Naturale, Sezione di Zoologia "La Specola", Università di Firenze, Italy.
NHM	The Natural History Museum, London, United Kingdom.
SAMA	South Australian Museum, Adelaide, Australia.

Taxonomy

Microtrachelizini Zimmerman

Microtrachelizina Zimmerman, 1994: 182. Type-genus: *Microtrachelizus* Senna, 1893: 315. Microtrachelizini Morrone, 1998: 132.

Distribution. Afrotropical region (including Madagascar), Oriental region from India to Japan, Australian region.

Araiorrhinus Senna

Araiorrhinus Senna, 1893: 325. Type-species: *Araiorrhinus longirostris* Senna, 1893, by subsequent designation (Kleine, 1938).

Diagnosis. Head much broader than long; temples much shorter than length of eyes. Prorostrum lengthened, at least 0.8× longer than head + metarostrum + mesorostrum. Last antennal segment acuminated at apex. Elytra glabrous. Sternite VII of abdomen with two latero-apical depressions. Gonopods IX fused at base, without sclerified lateral tooth. Styli strongly reduced, apical. A more comprehensive diagnosis for this genus is the subject of another work in preparation.

Distribution. Oriental and Australian regions.

Araiorrhinus howittii (Pascoe)

Trachelizus howittii Pascoe, 1872: 320.
Microtrachelizus howitti [sic] (Pascoe): Senna, 1893: 318.
Araiorrhinus howitti [sic] (Pascoe): Damoiseau, 1966: 13.
Araiorrhinus australicus Senna, 1893: 327; Damoiseau, 1987: 66 (syn.).

Material examined. QUEENSLAND: 1 ex., N. Qld., 6 km SW of Kuranda, 6.xi.–10.xii.1984, Storey & Halfpapp (NHM); 1 ex., N. Qld., Windsor Tableland via Mt Carbine. Malaise T., 26.xii.1983–24.i.1984, Storey & Halfpapp (NHM); 1 ex., N. Qld., Wongabel S.F., 6 km S of Atherton, 9.i.–10. ii.1984, Storey & Brown (NHM); 1 ex., Whitfield, Cairns, N. Q., 2100', 27.x.71, at light (MNHN); 1 ex., 26 km up Tinaroo Ck Rd via Mareeba, N. Qld., 23.xii.1982–12.i.1983, Morgan, Brown & Storey (NHM); 1 ex., Kuranda, N. Q., Black Mtn Rd, 11 miles N, 6 Nov 1975, A. & M. Walford-Huggins (NHM); 1 ex., Binna Burra, QLD, Lamington Nat. Pk, 25 Mar.–4 Apr. 1985, J. & N. Lawrence, surfaces at night (ANIC); 2 ex., Bunya Mts, Q., 26°50'S 151°33'E, 5 km from summit on Kingaroy Rd, 6.i.70, under bark of decaying log., E. B. Britton (ANIC and MNHN); 1 ex., 15°47'S 145°14'E, Shiptons Flat, QLD, 17–19 Oct. 1980, T. Weir (ANIC); 1 ex., 28°14'S 153°08'E, Lamington N. P., (O'Reillys), Q., 2–4 March 1980, J. F. Lawrence, lot 80–26, *Ganoderma applanatum* (ANIC); 1 ex., 15°04'S 145°09'E, QLD, 3 km E of Mt Webb, 30 Apr–2 May 1981, A. A. Calder, collected at light (ANIC); 2 ex., Brisbane (ANIC); 1 ex., Tully R. Xing, 10 km S Koombooloomba Dam, N. Qld, 8 Dec 1989–4 Jan 1990, 750 m, Monteith, Thompson & Janetski, pitfall and intercept traps (QMB); 1 ex., Mossman Bluff Track, 4–10 km W Mossman, N. Qld, 20 Dec 1989–15 Jan 1990, 600 m, Monteith, Thompson & Anzses, site 4, flt intercept (QMB); 1 ex., Mt Father Clancy, 9 km S Millaa Millaa, N. Qld, 6 Dec 1988, 950 m, Monteith & Thompson, *Pyrethrum*/logs and trees (QMB); 1 ex., Windsor Tableland, N. Qld, 27 Dec 1988–8 Jan 1989, E. Schmidt & Anzses, site 6, flt. intercept (QMB); 1 ex., NEQ: 17°28'S 145°32'E, Kenny Road, 25 Nov 1994–10 Jan 1995, 850 m, Monteith & Hasenpusch, flt. intercept (QMB); 1 ex., NEQ: Lake Eacham, 750 m, 9 Dec 1989–14 Jan 1990, Monteith, Thompson & Janetzki, pitfall and intercept (QMB); 1 ex., NEQ: 17°22'S 145°42'E, Lamins Hill, 1 Dec 1993–25 Feb 1994, 880 m, Monteith & Hasenpusch, RF Pitfalls (QMB); Coorumba, 10.XII.1975, QLD (AMS).

NEW SOUTH WALES: 1 ex., N.S. Wales, A. M. Lea 1909 (MSNG); 1 ex., N. Galles (MNHN); lectotype *A. australicus*, New S Wales, Australia, don. Dr Faust (MZUF); 1 ex., N.S.W., Bar Mountain, Border Ranges N.P., 17.II.2005, leg. R. de Keyzer (HNHM); 1 ex., N.S.W., 37°04'30"S 148°28'00"E, 4 km NE Mt Wog Wog, 17 km SE Bombala, Jul. 1996, leg. C.R. Margules (HNHM); N.S.W., 4 km NE Wog Wog, 17 km SE Bombala, 37°04'30"S 148°28'00"E, pit trap, Apr. 1997, leg. Milkovits (HNHM); 1 ex., New England Nat. Park, 12.x.66, E. Britton (ANIC); 1 ex., 35°16'S 149°06'E, Black Mtn Reserve, 15 Mar 1985, Z. Liepa coll. (ANIC); 1 ex., Malaise trap, Black Mtn, Mar.1982, I. D. Naumann & J. C. Cardale (ANIC); 1 ex., North Canberra, 28 Mar 1985, K. R. Pullen (ANIC); 1 ex., Black Mt., 25 Nov 1979, J. F. Lawrence, Lot 79–43, rotten base of *E. mannifera* (ANIC); 1 ex., 28°22'S 153°05'E, Wiangaree S. F., NSW, 1050 m, 10–12 Feb. 1983, T. Weir & A. Calder, surfaces at night (ANIC); 1 ex., Black Mt A. C. T., light trap, 30.iii.68, M. S. Upton (ANIC); 2 ex., "Lorien" W. R. 3 km N Lansdowne/Taree, NSW, 3–10 Jan 1988, G. Williams, malaise trap (ANIC and MNHN); 1 ex., 32°07'S 151°29'E, NSW, Allyn Riv. For. Park, White Rock campsite, 5 Apr. 1993, C. Reid, beating rainforest vegetation (ANIC); 1 ex., Lilyvale, New South Wales, 4.1972, R. H. Mulder (ANIC); 4 ex., Neilson Pk, NSW, XII.1930, K. K. Spence (AMS); NSW, Brindle Ck Rd, 2.5 km N of Brindle Ck, 28°22'S 153°04'E, Border Range NP, 965 m (NPWS Survey), 4.II.-9.IV.1993, M. Gray, G. Cassis (AMS);

LORD HOWE ISLAND (NSW):1 ex., NSW, Southern face of Mt Lidgberg, at base of summit tabletop, Lord Howe Is., 31°34'37"S 159°05'04"E, 26.XI–03. XII.2000, pit trap (MNHN); 1 ex., NSW, cnr Lagoon Rd & Middle Bay Rd, 31°31'47"S 159°03'56"E, 15.II.2001, M. S. Moulds, passive sampling (AMS); NSW, Research Station backyard, Lord Howe Island, 31°31'37"S 159°03'58"E, 24.II.2002, M. S. Moulds, passive sampling (AMS); NSW, Lord Howe Island, Stephens Reserve, c 10 m, 31°31'33"S 159°03'53"E, 29.XI.2000, beating, C. Reid (AMS).

Habitus. Fig. 9.

Distribution. This species is endemic to Australia, apparently common in Queensland, New South Wales and Lord Howe Island.

Araiorrhinus zimmermani n.sp.

Microtrachelizus species 2, Zimmerman, 1991: 151; 1994: 192, 193, 194.

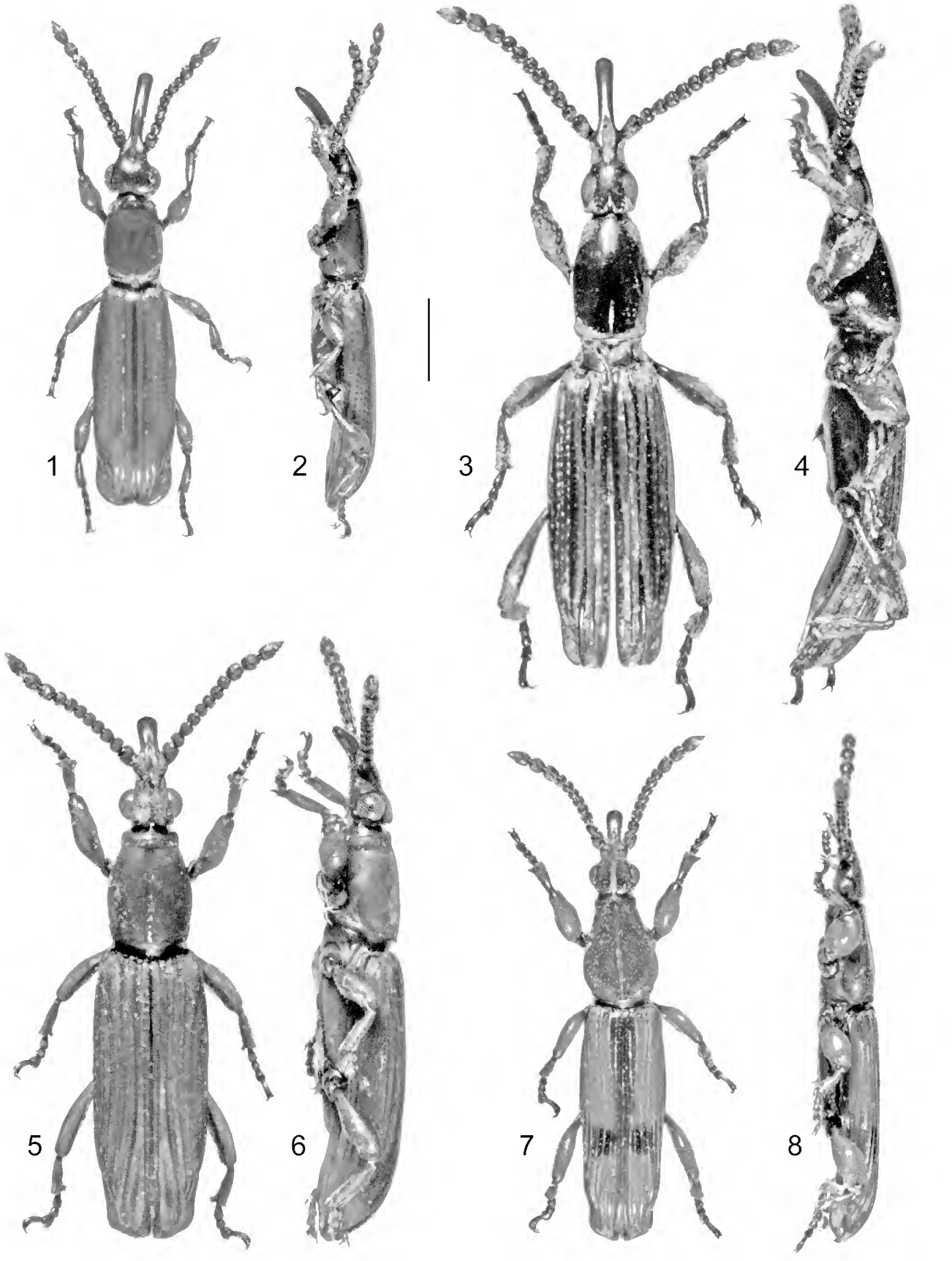
Type material. HOLOTYPE ♀, Mt Glorious, 4.I.1974, R. A. Yule, associated with *Eurhamphus fasciculatus* in Hoop Pine (ANIC). PARATYPES: ♀, Mt Glorious, 16.V.1974, R. A. Yule, MNHN EC1816 (MNHN); ♂, E. Sutton, 20.7.32, Rivertree (ANIC).

Description. Measurements. Length: 5.1–5.6 mm; width across humeral calli: 0.7–0.9 mm; ratios: length of head/length of pronotum: 1.3–1.4; length of pronotum/width of pronotum: 1.4–1.5; base of pronotum/apex of pronotum: 1.1–1.2; length of pronotum/length of elytra: 0.38–0.40; length of elytra/width of elytra: 3.3–3.9. —*Colour*. Brownish-red. — *Habitus*: Figs 1–2. — *Head* (Fig. 14) strongly broader than long, convex, smooth, shiny, without basal notch. Eyes large, projecting laterally; temples very short, almost indistinct, not protruding behind eyes. Vertex and frons smooth. Metarostrum and mesorostrum with broad, deep median groove vanishing on basal half of prorostrum; metarostrum without lateral grooves. Prorostrum 1.0–1.3× longer than head + metarostrum + mesorostrum. Antennal segment 3 (Fig. 15) conical, hardly longer than broad; 4–8 almost cylindrical, broader than long; 9–11 not flattened, forming a club, 11th 1.7–1.9× longer than 10th, strongly acuminate at apex. Venter of head and metarostrum longitudinally grooved; mesorostrum with a weak projection on either side under antennal base; lower side of mesorostrum and base of prorostrum with few erect setae. —*Pronotum* (Fig. 14) cylindrical, shiny, smooth, without longitudinal groove except at base. Prothorax without fovea in front of strongly bulging and conical procoxae; prosternellum distinct, depressed. Meso- and metafemora pedunculate. Protibiae (Fig. 16) 0.7–0.8× as long as profemora. Metasternum convex, not grooved, smooth, laterally not carinate. Elytra glabrous, base straight; sides smooth and shiny; apex strongly rimmed, not notched. Interstria 2 distinct only at apex; 3 distinct at base and apex, very narrow in middle; 4 hardly distinct from base to apical declivity; 5–9 indistinct. Hind wings without basal sclerite (Fig. 50). — *Abdomen*. Sternites III–IV in female (Fig. 17) smooth, depressed in middle, laterally not carinate; V–VI smooth; VII with weak transverse basal notch and two large, deep latero-apical depressions, without apical fovea. Tergite VIII of female (Fig. 18) strongly denticulate at apex. Spermatheca as in Fig. 19. Gonocoxites (Fig. 20) fused at base; styli apical, reduced. Sternites III–IV in male more depressed; V–VII as in female. Spiculum gastrale as in Fig. 21. Tegmen (Fig. 22) with parameres short, reduced, filiform, not fused.

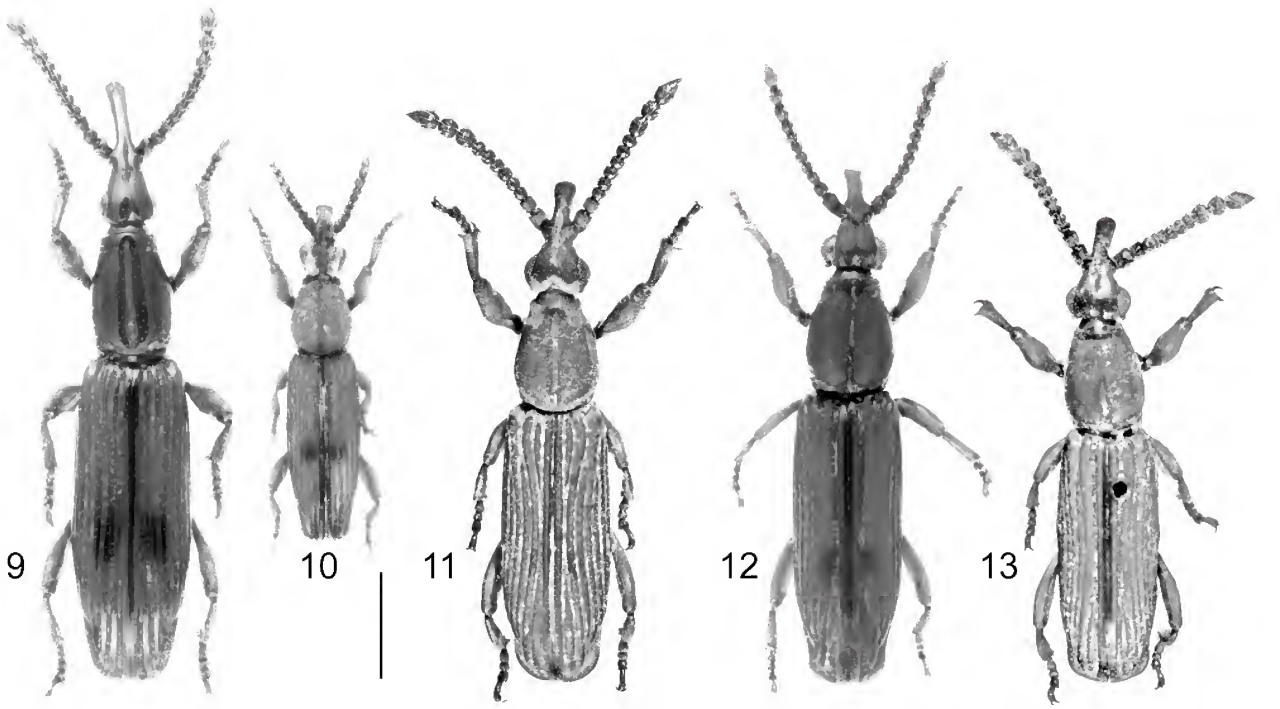
Distribution. Known from southern Queensland (Mount Glorious) and northern New South Wales (Rivertree).

Etymology. This new species is kindly dedicated to Elwood C. Zimmerman, in recognition of his great work on the Australian Curculionoidea.

Remarks. This new species was regarded by Zimmerman (1991: 151; 1994: 192–194) as belonging to the genus *Microtrachelizus*, but its apically inserted styli and long prorostrum (longer than head + metarostrum + mesorostrum) indicate that it belongs in *Araiorrhinus* instead. This is the second species of *Araiorrhinus* known from Australia. In the identification key of Damoiseau (1987) for this genus, the new species runs to *A. longirostris* Senna, 1893 (a synonym of *A. exportatus* Senna, 1893: see Mantilleri, 2007) and *A. levisulcatus* Damoiseau, 1987, but it differs from all *Araiorrhinus* species in its completely smooth elytra.



Figs 1–8. Dorsal and lateral habitus of new species of Australian Microtrachelizini, holotypes. *(1–2) Araiorrhinus zimmermani* n.sp., ♀. (3–4) *Howeius micropterus* n.gen., n.sp., ♂. *(5–6) Microtrachelizus altostriatus* n.sp., ♂. *(7–8) Microtrachelizus australicus* n.sp., ♂. Scale 1 mm.



Figs 9–13. Dorsal habitus of Australian Microtrachelizini. *(9) Araiorrhinus howittii* (Pascoe, 1872). *(10) Higonius novenarius* Damoiseau, 1987. *(11) Microtrachelizus montrouzieri* Senna, 1903. *(12) M. occultus* Kleine, 1935. *(13) M. queenslandicus* Damoiseau, 1987. Scale 1 mm.

Higonius Lewis

Higonius Lewis, 1883: 299. Type species: *Higonius poweri* Lewis, 1883: 299, by subsequent designation (Kleine, 1938).

Diagnosis. Head broader than long, notched at base, bilobed above neck; temples shorter than length of eyes. Vertex, frons and metarostrum grooved. Mesorostrum strongly raised, forming a kind of plate above antennal insertion. Prorostrum much shorter than head + metarostrum + mesorostrum. Last three antennal segments flattened. Pronotum longitudinally grooved. Interstria 8 forming the external apical border of elytra. Hind wings with strongly sclerified basal sclerite. Sternites V–VI with three basal notches; sternite VII with two latero-apical depressions. Gonopods IX fused at base, with sclerified lateral tooth. Styli strongly reduced, lateral.

Distribution. Oriental and Australian region.

Higonius (Higonodes) novenarius Damoiseau

Higonius novenarius Damoiseau, 1987: 48.
Higonodes novenarius (Damoiseau): Zimmerman, 1994: 188.
Higonius (Higonodes) novenarius Damoiseau: Mantilleri, 2009.

Habitus. Fig. 10.

As a result of a phylogenetical analysis (Mantilleri, 2009), the genus *Higonodes* Zimmerman, 1994 was downgraded to the rank of a subgenus of *Higonius*. Indeed, characters cited to support the creation of the monotypic genus *Higonodes* are mainly autapomorphic, without phylogenetic implications. No specimens from Australia could be examined, but the good illustrations in Zimmerman (1994: 185–187) leave no doubt about the occurrence of this species in this country. It also occurs in New Guinea.

Howeius n.gen.

Lord Howe Genus A, Zimmerman, 1991: 157; 1994: 215.

Type species. *Howeius micropterus* n.sp.

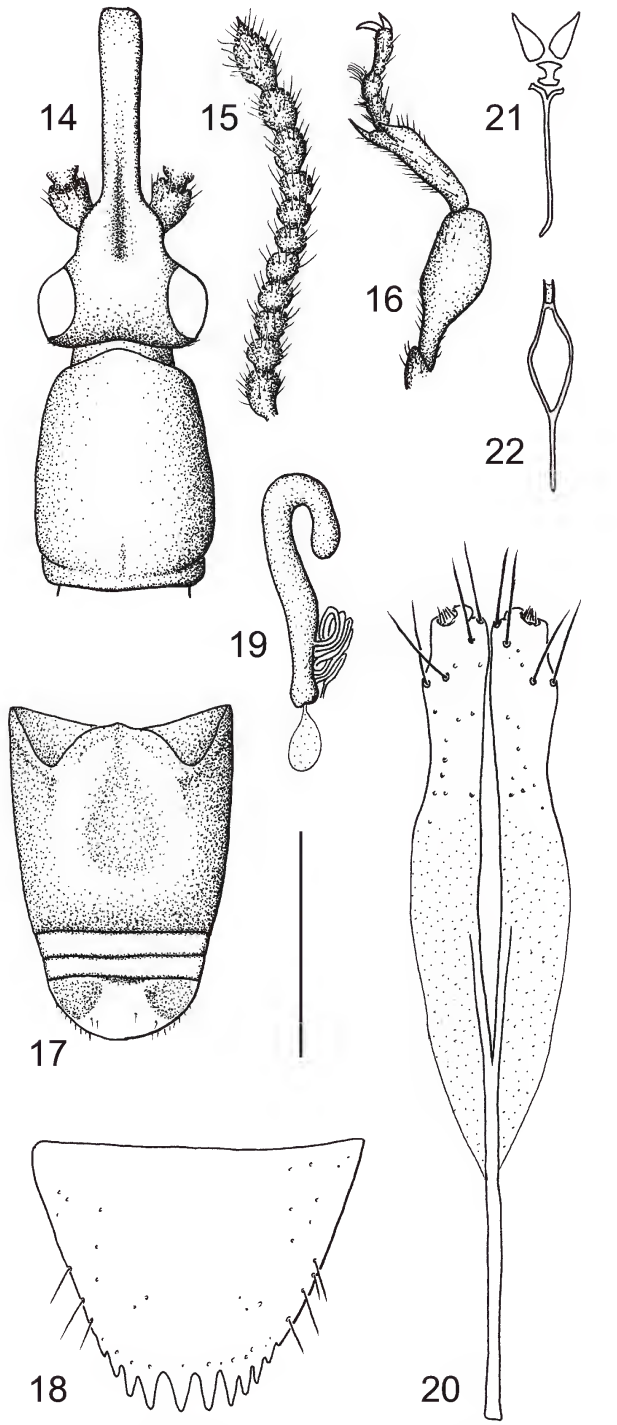
Diagnosis. Prorostrum longer than 0.5× the length of head + metarostrum + mesorostrum; mesorostrum with a small projection on either side under antennal base. Metasternum and sternites III–IV laterally not carinate. Sternites V–VI smooth, without basal notch; VII with two latero-apical depressions and no basal notch or apical fovea. Gonocoxites (Fig. 33) fused at base; apex with a strong sclerotized lateral tooth; styli apical, reduced.

Remarks. The characters given in the diagnosis of the genus are not repeated in the description of the new species below.

Howeius micropterus n.sp.

Type material. HOLOTYPE ♂, Aust: NSW, Lord Howe Island, S. & J. Peck, 17–31.V.1980, Transit Hill, 350', pan traps, lowland tall forest (ANIC). PARATYPES: ♀, NSW, Steven's Reserve Disturbance Gradients, Lord Howe Is., 31°31'25"S 159°04'06"E, 08–15.XII.2000, H. Gibb, R. Harris & T. Moulds, LHI/SR/30/2/1 (pit trap), K192981, prép. micro. no. AM00113, MNHN EC1813 (MNHN); ♀, NSW, Lord Howe Island, Mt Gower, leaf litter, 31°35'S 159°04'E, 100 m, 01.XI.1978, T. Kingston, K188532 (AMS); ♂, NSW, Mt Lidgbird, SE end in dip between "Pimple" and main cliff, 31°34'18"S 159°05'00"E, 21.V.2001, Ian Hutton, leaf litter ex. leaf litter caught in birds nest fern *Asplenium goudeyi*, 15 m off ground, K188534 (AMS); ♂, NSW, Mt Gower, Lord Howe Island, Midway down gully near igloo, 31°35'06"S 159°04'32"E, ca 782 m, 18–31.I.2002, I. Hutton, MG002 (pit trap), K185284 (AMS); ♂, NSW, in forest behind research station, Lord Howe Island, 31°31'37"S 159°03'58"E, 22.II.2001, Jaynia Tarnawski, LHI/JT/08L, leaf litter ex palm and banyan litter, K188533, MNHN EC1814 (MNHN).

Description. Measurements. Length: 7.6–10.3 mm; width across humeral calli: 0.93–1.40 mm; ratios: length of head + rostrum/length of pronotum: 1.2–1.4; length of pronotum/



Figs 14–22. *Araiorrhinus zimmermani* n.sp. (14) Head and pronotum, dorsal view. (15) Antenna. (16) Left front leg. (17) Abdomen of female, ventral view. (18) Tergite VIII of female. (19) Gonocoxites. (20) Spermatheca. (21) Spiculum gastrale. (22) Tegmen. Scale for Figs 14–17 and 21–22, 1 mm; scale for Figs 18–19, 0.35 mm; scale for Fig. 20, 0.17 mm.

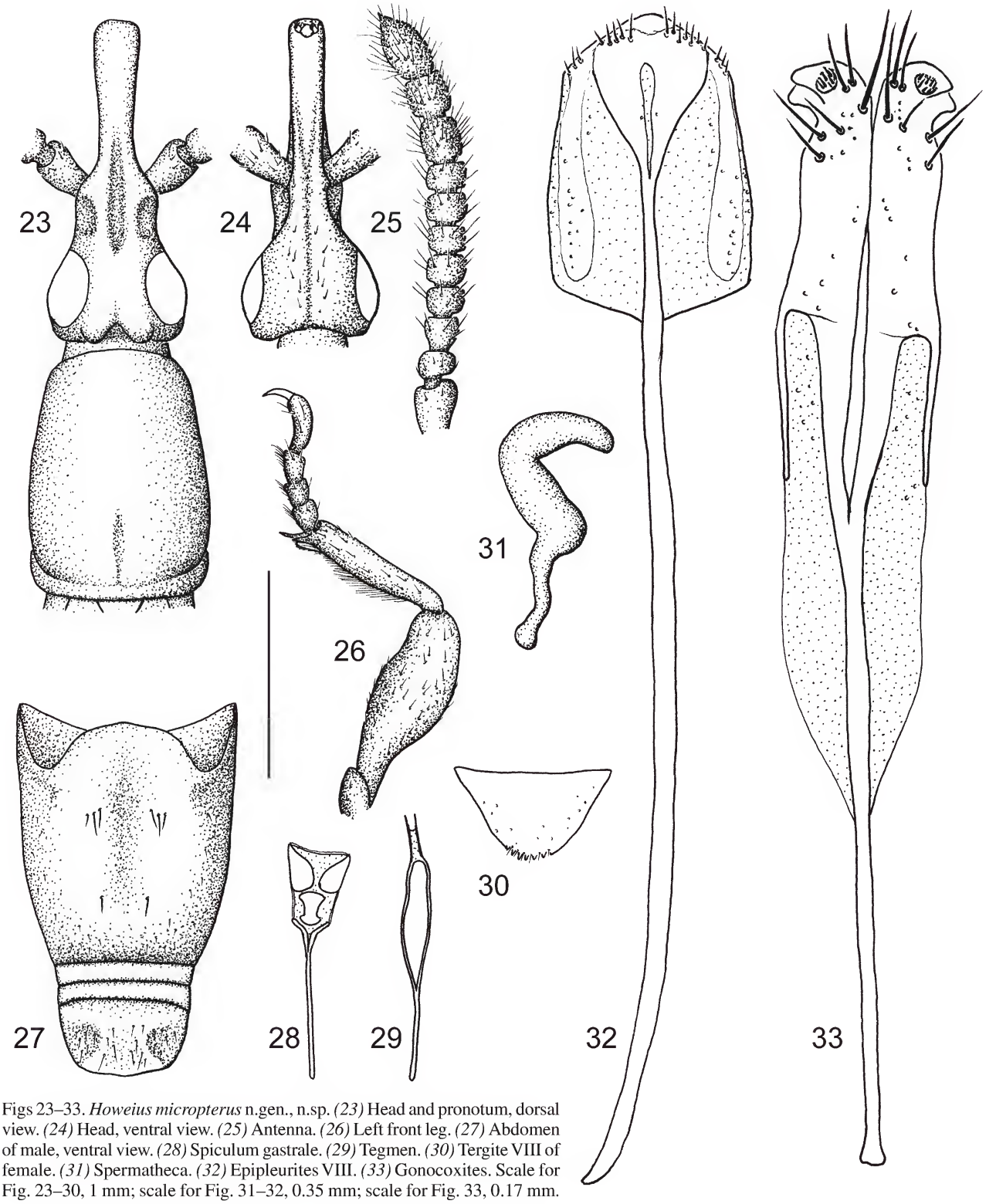
width of pronotum: 1.5–2.0; base of pronotum/apex of pronotum: 1.1–1.4; length of pronotum/length of elytra: 0.45–0.55; length of elytra/width of elytra: 2.6–3.0; length of protibia/width of protibia: 4.8–5.3. — *Colour*. Brownish-red to dark brown. — *Habitus*: Figs 3–4. — *Head* (Fig. 23) broader than long, quite convex, smooth, with a deep median notch at the base. Eyes large but not projecting laterally; temples very short, not protruding behind eyes. Vertex and frons smooth. Metarostrum and mesorostrum strongly grooved longitudinally, the groove reaching base of prorostrum; metarostrum with well-marked lateral grooves. Prorostrum smooth, 0.8–1.1× as long as head + metarostrum + mesorostrum. Antennal segment 3 (Fig. 25) conical, 4–8 cylindrical with a row of long raised setae; 9–11 not flattened, forming a club, 11th 1.7–1.8× longer than 10th, acuminated at apex. Venter of head tomentous, metarostrum and mesorostrum and basal half of prorostrum with a longitudinal groove (Fig. 24). — *Pronotum* cylindrical (Fig. 23), smooth, shiny, grooved only on basal third. Prothorax slightly depressed in front of procoxae; prosternellum hardly distinct. Procoxae bulging, strongly conical. Legs punctate; all femora with yellowish setae on underside (especially in male); meso- and metafemora pedunculate. Protibiae (Fig. 26) 0.8× as long as profemora. Metasternum quite convex, smooth, not grooved. Elytra glabrous, almost completely fused together, the base slightly concave with weak humeral callus. Interstria 2 present almost from base to apex; 3 strongly elevated at base, then more depressed but still distinct, elevated at apex; interstria 4 present from base to apical declivity; 5–6 hardly distinct; 7 more elevated; 8 as 5 and 6; 9 as 7 and forming the external apical border of elytra. Apex of elytra not rimmed nor notched. Mesonotum triangular, its apex pointing upwards. Metanotum weakly sclerotized. Hind wings reduced to small membranous strips.

Sternites III–IV in male (Fig. 27) almost smooth, with few fine punctures and a median longitudinal depression; three large setae on each side of sternite III and one large setae on each side of sternite IV. Spiculum gastrale as in Fig. 23. Tegmen (Fig. 29) with parameres reduced and filiform, not completely fused. Sternites III–IV in female similar to male, longitudinal depression on sternite III weaker and large setae missing. Tergite VIII denticulate at apex (Fig. 30). Spermatheca as in Fig. 31. Epipleurites VIII as in Fig. 32.

Distribution. Recorded only from Lord Howe Island and probably endemic there as its elytra are almost completely fused and its hind wings are not functional.

Etymology. The generic name derives from Lord Howe Island and is masculine in gender, and the specific epithet describes the strong reduction of the hind wings.

Remarks. This new taxon was figured by Zimmerman (1991: 157) under the name Lord Howe Genus A, and listed in his subtribe Trachelizina. However, it belongs to Microtrachelizini as indicated by the structure of the ventral side of the mesorostrum (presence of two small projections under the antennal insertions), the third protarsal segment not being bilobed, sternite VII having two latero-apical depressions, the tegmen being ring-shaped with filiform parameres and the gonocoxites of female fused at based, with reduced styli. Its placement in Microtrachelizini is not clear: its elongated prorostrum



Figs 23–33. *Howeius micropterus* n.gen., n.sp. *(23)* Head and pronotum, dorsal view. *(24)* Head, ventral view. *(25)* Antenna. *(26)* Left front leg. *(27)* Abdomen of male, ventral view. *(28)* Spiculum gastrale. *(29)* Tegmen. *(30)* Tergite VIII of female. *(31)* Spermatheca. *(32)* Epipleurites VIII. *(33)* Gonocoxites. Scale for Fig. 23–30, 1 mm; scale for Fig. 31–32, 0.35 mm; scale for Fig. 33, 0.17 mm.

places it near *Araiorrhinus* but its elytral venation, apex of elytra and structure of gonocoxites differ strongly from the conditions in *Araiorrhinus* where there is no strong sclerotization of the apex of gonocoxites (see Fig. 20 for comparison with *A. zimmermani* and Fig. 49 for comparison with representative of the genus *Microtrachelizus*). This new taxon seems to occupy an intermediate position between *Araiorrhinus* and *Microtrachelizus* and does not fit with any of the known genera of the tribe. It represents probably a quite old lineage but its presence on Lord Howe Island is surprising as this island is only 6.9 million years old (McDougall *et al.*, 1981), but exemples exist in other groups of Arthropoda, e. g. in Insecta Hemiptera with the endemic genus *Howeria* Evans, 1959 (Burckhardt, 2009) or in Araneae Micropholcommatidae Hickman, 1943 with the endemic monotypic tribe Patelliellini (Rix & Harvey, 2010).

Being an oceanic island, it is very possible that this species derives from a migrant to Lord Howe Island and that the sister-species of *H. micropterus* still waits to be discovered, probably on the Australian mainland or in New Guinea. Loss of the hind wings in such a short time (less than 6.9 My) is not surprising; it is well documented for other groups of beetles on similar or even shorter periods (Boucher, 2006).

Microtrachelizus Senna

Microtrachelizus Senna, 1893: 315. Type-species: *Trachelizus lyratus* Perroud & Montrouzier, 1865, by subsequent designation (Kleine, 1938).

Diagnosis. Head without cephalic lobes above neck. Prorostrum shorter than 0.8× head + metarostrum + mesorostrum. Mesorostrum not strongly raised. Sternite VII of abdomen with two latero-apical depressions. Gonopods IX with sclerified lateral tooth. Styli strongly reduced, lateral. A more comprehensive diagnosis for this genus is the subject of another work in preparation.

Distribution. Afrotropical region (including Madagascar), Oriental region from India to Japan, Australian region.

Microtrachelizus altostriatus n.sp.

Microtrachelizus species 4, Zimmerman, 1991: 151; 1994: 195.

Type material. HOLOTYPE ♂, Cape York Pen., N. Q., Iron Range, 15 Sept. 1974, Coll. A. & M. Walford-Huggins (ANIC). PARATYPE ♂, 12°44'S 143°16'E, 6 km ENE of Mt. Tozer, QLD, 30 June 1986, T. Weir & A. Calder, collected at light, MNHN EC1817 (MNHN).

Description. Measurements. Length: 6.3–6.5 mm; width across humeral calli: 1.0–1.1 mm; ratios: length of head/length of pronotum: 0.9–1.0; length of pronotum/width of pronotum: 1.3; base of pronotum/apex of pronotum: 1.3–1.4; length of pronotum/length of elytra: 0.4; length of elytra/width of elytra: 3.3. — *Colour*. Brownish-red. — *Habitus*. Figs 5–6. — *Head* (Fig. 34) broader than long, smooth, with three strong basal notches. Eyes large, projecting laterally; temples indistinct. Vertex and frons not grooved. Metarostrum and mesorostrum strongly grooved, the groove vanishing on prorostrum; metarostrum with deep lateral grooves. Prorostrum 0.5× as long as head + metarostrum + mesorostrum. Antennal segment 3 (Fig. 35) broader than long, conical; 4–8 broader than long, cylindrical; 9–10 not flattened, 11th 1.7–1.8× longer than 10th and acuminate at apex. Venter of head and metarostrum grooved; mesorostrum with a small projection on either side under antennal base. — *Pronotum* (Fig. 34) without punctures, longitudinally grooved. Prothorax with a small fovea in front of procoxae; prosternellum almost indistinct. Protibiae (Fig. 36) 1.40–1.45× longer than profemora. Metasternum flat, grooved, laterally carinate, not punctate. Meta- and mesofemora not pedunculate; inner spur of meso- and metatibia enlarged in male, not bifid. Elytra glabrous, base slightly concave; interstriae elevated. Interstria 2 distinct only at apex; 3 present from base to apex; 4 reaching apical declivity; 5, 6 and 7 fused anteriorly to form a common humeral callus. Apex of elytra rimmed, external apical border formed by interstria 9. Hind wings (Fig. 40) with basal sclerite.

Sternites III–IV in male (Fig. 37) depressed, very slightly carinate on sides before lateral declivities; V–VI each with three basal notches in middle; VII in middle with deep basal notch and apical fovea, latero-apically with two depressions. Spiculum gastrale as in Fig. 38. Tegmen (Fig. 39) with parameres fused at base.

Female unknown.

Distribution. Only known from Queensland, Australia.

Etymology. The specific epithet derives from the Latin words "*altus*", meaning deep, and "*striatus*", meaning striated, referring to the well-marked elytral striae of the species.

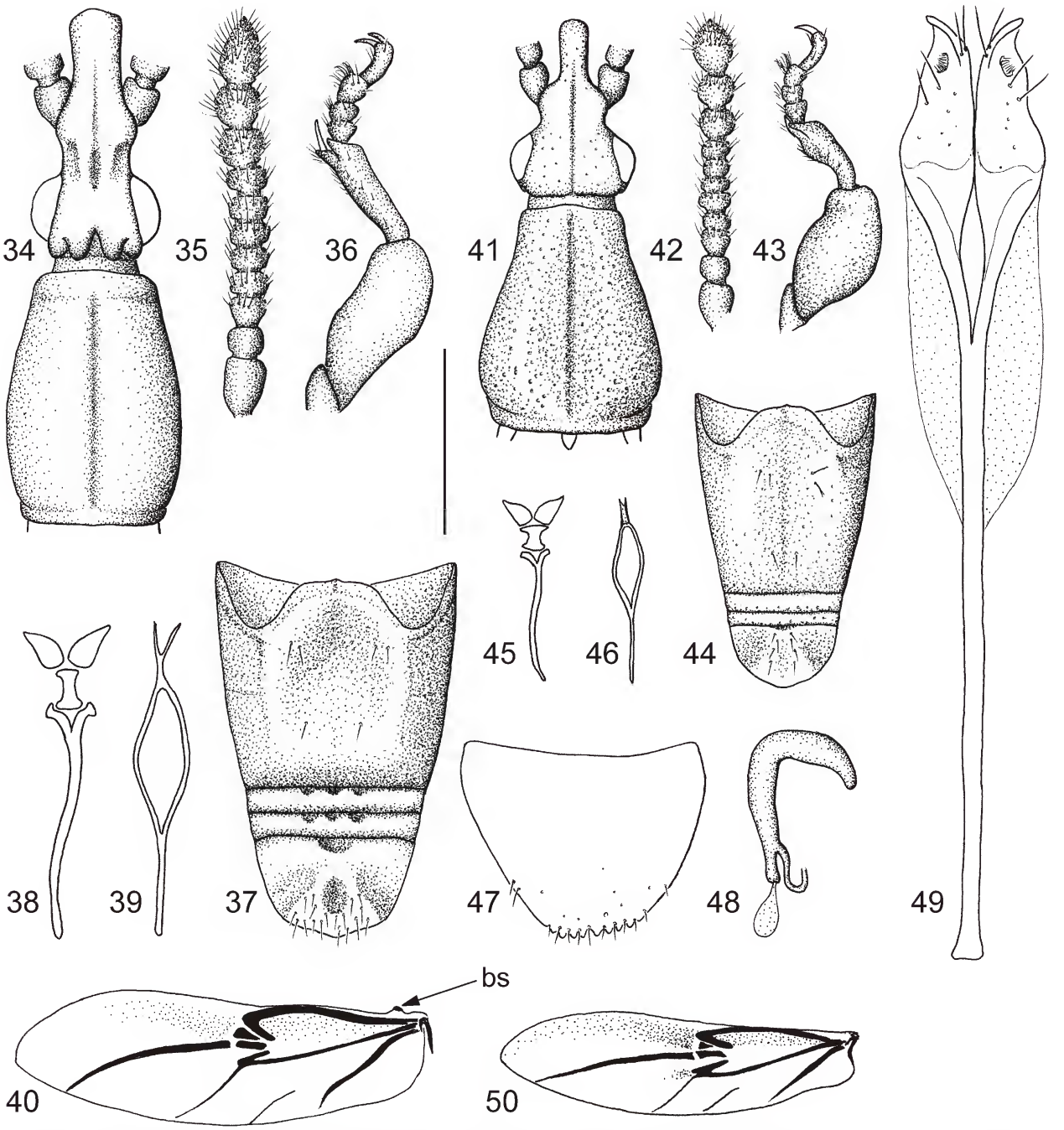
Remarks. This species is probably related to the Oriental species *M. bhamoensis* (Senna, 1892) and *M. cylindricornis* (Power, 1880), which also have the parameres fused at the base, but it differs from the former in having more strongly elevated interstriae and a less strongly rounded elytral apex and from the latter in having elytral interstria 2 distinct posteriorly (obsolete in *H. cylindricornis*).

Microtrachelizus australicus n.sp.

Microtrachelizus species 6, Zimmerman, 1991: 153; 1994: 195.

Type material. HOLOTYPE ♂, QLD. AUST., Cairns, 11 Oct 71, Whitfield R., 11 miles [along road], Collr A. & M. Walford-Huggins (ANIC). PARATYPES: 1♂, Whitfield R., Cairns N. Q., 1350', 16.II.71, J. G. Brooks, MNHN EC1821 (MNHN); 1♀, Whitfield, Cairns N. Q., 1100', 14.XII.70, J. G. Brooks (ANIC); 1♀, Australia: n. Qld, Windsor Tableland, 38 km from main road, 15.I.–8.III.1986, Storey & Brown, MDPI intercept trap site no. 14C (ANIC); 1♂, Australia, Cairns, Qld, Nov. 1947, J. G. Brooks, E. Gowing-Scopes collection (NHM); 1♂, Australia, N. QLD, Millaa Millaa Falls, 4.I.–7.II.1990, Storey & Halfpapp, MDPI F.I.T. site 34, E. Gowing-Scopes collection (NHM); 1♀, Kuranda, N. Q., 8.3.69, J. G. B., prép. micro. no. AM00086, MNHN EC1818 (MNHN).

Description. Measurements. Length: 4.4–5.4 mm; width across humeral calli: 0.7–0.9 mm; ratios: length of head/length of pronotum: 0.7–0.9; length of pronotum/width of pronotum: 1.3–1.4; base of pronotum/apex of pronotum: 1.4–1.6; length of pronotum/length of elytra: 0.40–0.45; length of elytra/width of elytra: 3.1–3.3. — *Colour*. Head, antennae and pronotum brownish-red; legs and elytra paler. Elytra with darker sutural stripe and transverse post-median blotch. — *Habitus*. Figs 7–8. — *Head* (Fig. 41) strongly broader than long, finely punctate, with small basal median notch. Eyes large, projecting laterally; temples short not protruding behind eyes. Vertex and frons shallowly grooved. Metarostrum, mesorostrum and base of prorostrum longitudinally grooved, metarostrum without lateral grooves. Prorostrum with very fine punctures, 0.5–0.7× as long as head + metarostrum + mesorostrum. Antennal segment 3 (Fig. 42) broader than long, conical; 4–8 subglobular, broader than long, with a row of long raised setae; 9–11 slightly flattened, 11th 1.6–2.0× longer than 10th. Venter of head, metarostrum and mesorostrum longitudinally grooved; mesorostrum with small projection on either side under antennal base. — *Pronotum* (Fig. 41) flattened, almost depressed on disc, longitudinally grooved, much broader at base than at apex, with numerous fine punctures. Prothorax without fovea in front of quite rounded, hardly conical procoxae; prosternellum distinct. Protibiae (Fig. 43) 0.5–0.6× as long as profemora. Metasternum longitudinally grooved, laterally not carinate, punctate (especially on lateral declivities). Elytra glabrous, base straight. Interstria 2 present from base to apex; 3 more elevated and present from base to apex; 4 present from base to apical declivity; 5, 6 and 7 fused anteriorly to form



Figs 34–50. *(34–40) Microtrachelizus altostriatus* n.sp.: *(34)* Head and pronotum, dorsal view. *(35)* Antenna. *(36)* Left front leg. *(37)* Abdomen of male, ventral view. *(38)* Spiculum gastrale. *(39)* Tegmen. *(40)* Hind wing (*bs*, basal sclerite). *(41–50) Microtrachelizus australicus* n.sp.: *(41)* Head and pronotum, dorsal view. *(42)* Antenna. *(43)* Left front leg. *(44)* Abdomen of male, ventral view. *(45)* Spiculum gastrale. *(46)* Tegmen. *(47)* Tergite VIII of female. *(48)* Spermatheca. *(49)* Gonocoxites. *(50)* Hind wing. Scale for Figs 34–39 and 38–46, 1 mm; scale for Figs 40 and 50, 2.5 mm; scale for Figs 47–48, 0.35 mm; Fig. 49: 0.17 mm.

a common humeral callus; 8 present only on 2nd half of elytra; 9 forming external apical border of elytra. Apex of elytra not explanate nor notched at apex. Hind wings (Fig. 50) without basal sclerite.

Sternites III–IV (Fig. 44) slightly grooved and punctate, laterally not carinate, weakly depressed in male; V–VI finely punctate posteriorly; VII with transverse median notch at base and two latero-apical depressions, without apical fovea, in male with two rows of raised setae between latero-apical depressions. Spiculum gastrale as in Fig. 45. Tegmen (Fig. 46) with parameres reduced, filiform, short, not fused. Tergite VIII of female (Fig. 47) bluntly denticulate at apex. Spermatheca as in Fig. 48. Gonocoxites (Fig. 49) fused at base; styli reduced, lateral.

Distribution. Only known from North Queensland, Australia.

Remarks. This species cannot be confused with any other of the genus, but its affinities are still unclear.

Microtrachelizus montrouzieri Senna

Microtrachelizus montrouzieri Senna, 1903: 167.
Microtrachelizus laevis Damoiseau, 1987: 56, **new synonym**.

Material examined. Holotype *M. laevis*, Mackay (SAMA); 1 ex., Australia, Cairns, Qld., Nov. 1947, J.G. Brooks (MNHN); 1 ex., Boar Pkt., N.Q. (NHM); 1 ex., Whitfield, Cairns, N.Q., 2100', 27.x.71, at light (NHM); 1 ex., Mt Formartine South, 10 km N Kuranda, N. Qld, 23 Nov. 1990, 700 m, Monteith & Thompson, *Pyrethrum* trees and logs (QMB); 1 ex., *Argyrodendron actinophyllum* Edlin, subtropical rainforest, 27.2–6.3.86, Mt Glorious State Forest, Qld, Y. Basset (ANIC).

Habitus. Fig. 11.

Comparison of the holotypes of *M. montrouzieri* and *M. laevis* revealed that these two names refer to the same species, and they are therefore here synonymized. This species also occurs in Indonesia (Sforzi & Bartolozzi, 2004).

Microtrachelizus occultus Kleine

Microtrachelizus occultus Kleine, 1935: 307.
Microtrachelizus species 5, Zimmerman, 1991: 151; 1994: 195.

Material examined. 1♀, Iron Ra., N. Q., 11.5.71, J. G. Brooks, at light (ANIC); 1♀, 12°43'S 143°17'E, 9 km ENE of Mt Tozer, QLD, 5–10 July 1986, T. Weir & A. Calder, collected at light (ANIC); 1♂, Iron Range, Cape York Pen., N. Qld, 16–23. xi.1965, G. Monteith (QMB).

Habitus. Fig. 12.

This species was described from New Guinea by Kleine (1935) and is here recorded from Australia for the first time. It was synonymized with *M. bhamoensis* (Senna, 1892) by Damoiseau (1987) and also so treated by Sforzi & Bartolozzi (2004). However, it is clearly different from *M. bhamoensis* in having the parameres not fused at the base and the prothorax hairy in front of the procoxae in males (glabrous in *M. bhamoensis*). *Microtrachelizus bhamoensis* is an Oriental species that does not extend in its distribution eastwards to New Guinea.

Microtrachelizus queenslandicus Damoiseau

Microtrachelizus queenslandicus Damoiseau, 1987: 56.
Microtrachelizus species 3, Zimmerman, 1991: 151; 1994: 195.

Material examined. Holotype ♂, Rocky R., Via Coen, Cape York Pen., N. Qld, 14–16. xii.1964, G. Monteith (QMB); 2 ex., 12°44'S 143°14'E, 3 km ENE of Mt Tozer, QLD, 28 Jun–4 Jul 1986, T. Weir & A. Calder (ANIC and MNHN); 1 ex., 15°47'S 145°14'E, Shiptons Flat, QLD, 17–19 Oct. 1980, T. Weir (ANIC).

Habitus. Fig. 13.

Distribution. Only known from Australia.

ACKNOWLEDGMENTS. I am grateful to Dr Rolf Oberprieler (ANIC) for making the material of Zimmerman's undescribed species available for study, checking the English text and suggesting many improvements on the manuscript. I also thank Dr Christine Lambkin (QMB) for the loan of the type of *Microtrachelizus queenslandicus*, Dr Maxwell Barclay (NHM), Dr Luca Bartolozzi (MZUF), Dr Otto Merkl (HNHM), Dr Roberto Poggi (MSNG), Drs Chris Reid and David Britton (AMS) for lending further unidentified specimens and allowing to retain vouchers for the MNHN collection, and Dr Stéphane Boucher (MNHN) for constructive discussions about the manuscript.

References

Damoiseau, R., 1966. Nouveaux Brentidae du Muséum Frey (Coleoptera—Phytophagoidea). *Entomologischen Arbeiten aus dem Museum G. Frey* 17: 7–24.

Boucher, S., 2006. Evolution et phylogénie des Coléoptères Passalidae (Scarabaeoidea). *Annales de la Société entomologique de France* (n. s.) 41(3–4) [2005]: 239–604.

Burckhardt, D., 2009. Taxonomy and phylogeny of the Gondwanan moss bugs or Peloridiidae (Hemiptera, Coleorrhyncha). *Deutsche Entomologische Zeitschrift* 56(2): 173–235.
doi:10.1002/mmnd.200900019

Damoiseau, R., 1987. Contribution à la systématique et corrections à la nomenclature des Calodrominae (Coleoptera Brentidae). II. Tribus des Hoplopisthiini, Atopobrentini et Stereodermini. *Bulletin de l'Institut Royal des Sciences Naturelles de Belgique, Entomologie* 57: 31–91.

Deuve, T., 1994. Sur la présence d'un épipleurite dans le plan de base du segment des Hexapodes. *Bulletin de la Société entomologique de France* 99(2): 199–210.

Gaiger, F., & S.A. Vanin, 2008. On the utility of female genitalia in the systematics of Curculionidae: examples from Entimini and Hylobiina (Coleoptera: Curculionidae). *Annales de la Société entomologique de France* (n. s.) 44(1): 47–57.

International Commision on Zoological Nomenclature, 1999. *International Code of Zoological Nomenclature, Fourth Edition*. The International Trust for Zoological Nomenclature, London.

Kleine, R., 1935. Bericht über die von Miss Cheesman in British Neu-Guinea gesammelten Brenthiden und Lyciden. *Nova Guinea (Zoologie)* 17: 303–322.

Kleine, R., 1938. Coleoptera. Fam. Brenthidae. *Genera Insectorum* 207: 1–197.

Lewis, G., 1883. On Japan Brenthidae, and notes on their habits. *Journal of the Linnean Society of London* 17: 295–302.
doi:10.1111/j.1096-3642.1884.tb02026.x

Mantilleri, A., 2007. Note synonymique dans le genre *Araiorrhinus* Senna, 1893 (Col., Brentidae). *Bulletin de la Société entomologique de France* 112(4): 476.

Mantilleri, A., 2009. Révision des *Higonius* Lewis, 1889, et genres apparentés (Insecta, Coleoptera, Brentidae). *Zoosystema* 31(4): 899–943.
doi:10.5252/z2009n4a7

McDougall, I., B.J. Embelton, & D.B. Stone, 1981. Origin and evolution of Lord Howe Island, southwest Pacific Ocean. *Journal of the Geological Society of Australia* 28: 155–176.

Morrone, J.J., 1998. The impact of cladistics on weevil classification, with a new scheme of families and subfamilies (Coleoptera: Curculionoidea). *Trends in Entomology* 1 [1997]: 129–136.

Pascoe, F.P., 1872. Notes on Coleoptera, with descriptions of new genera and species (part II). *Annals and Magazine of Natural History* (4) 10: 317–326.

Rix, M., & M. Harvey, 2010. The spider family Micropholcommatidae (Arachnida: Araneae: Araneoidea): a relimitation and revision at the generic level. *Zookeys* 36: 1–321.
doi:10.3897/zookeys.36.306

Senna, A., 1893. Contribuzioni allo studio dei Brentidi. Nota XXII. Su alcuni nuovi Brentidi importati col tobacco secco di Sumatra. *Bollettino della Società entomologica italiana* 25: 288–330.

Senna, A., 1903. Brentidi delle regioni dei Batacchi Indipendenti. *Bollettino della Società entomologica italiana* 34[1902]: 152–178.

Sforzi, A., & L. Barolozzi, 2004. Brentidae of the World (Coleoptera, Curculionoidea). *Monografie del Museo Regionale di Scienze Naturali, Torino* 39, 976 pp.

Zimmerman, E.C., 1991. *Australian Weevils (Coleoptera: Curculionoidea)*. Volume 5. Colour Plates 1–304. CSIRO, Australia, X + 633 pp.

Zimmerman, E.C., 1994. *Australian Weevils (Coleoptera: Curculionoidea)*. Volume 2. Brentidae, Eurhynchidae, Apionidae and a chapter on immature stages by Brenda May. CSIRO, Australia, X + 755 pp.